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(54) **Expansible finger rings**

(57) An expansible finger ring comprises a male hoop part 1 and a female hoop part 2 hinged together at 3. The hoop parts can be locked together to close the ring by interengaging the distal end 6 of a tongue 4 on the male hoop part in a recess 5 in the female hoop part. Unlocking the hoop parts to open the ring is effected by finger nail pressure applied to a narrowing gap formed between a shoulder (10) on the male hoop part and a confronting end of the female hoop part.

FIG.4

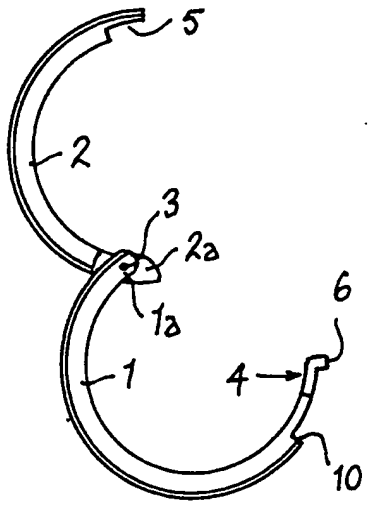

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FIG. 1

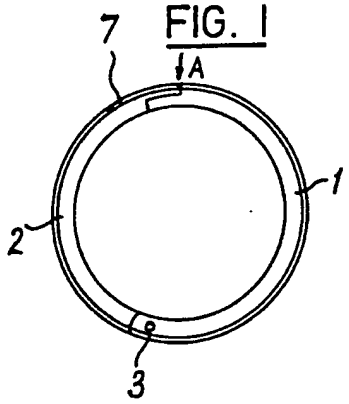


FIG. 2

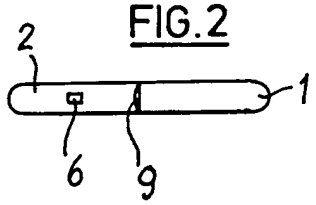


FIG. 3

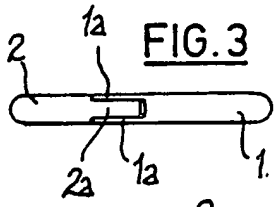
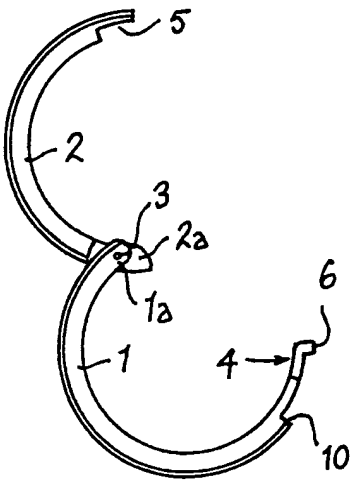


FIG. 4



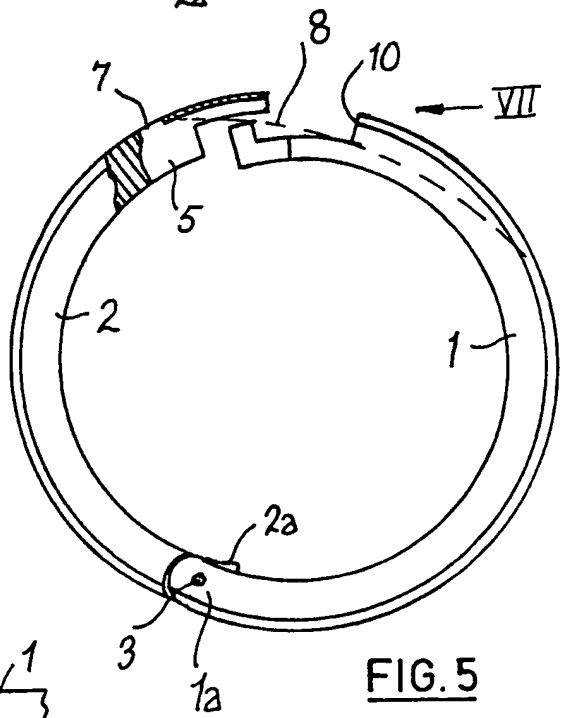


FIG. 5

FIG. 6

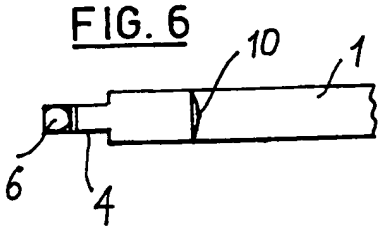
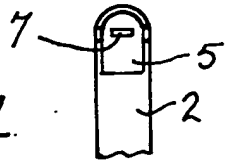


FIG. 7



SPECIFICATION

Improvements in and relating to expansible finger rings

This invention relates to a finger ring provided with a facility to permit the cross-section of the bore of the hoop to be increased to ease the passage of the ring over a finger joint.

Expansible finger rings are well known. Known arrangements are disclosed in the specifications of U.K. Patents 932,162 and 1,423,521. These known arrangements require the provision of two hinged connections in the hoop.

This invention relates to an improved expansible finger ring that has just one hinged connection in the hoop and which can be applied to both a shouldered ornamental finger ring (namely a finger ring which has a hoop that incorporates a shoulder supporting an ornament such as a precious or semi-precious stone, a pearl, a cameo or a coin) and a single hoop ring.

According to the present invention an expansible finger ring comprises male and female hoop parts, joined at a hinge connection for movement between expanded and closed conditions of the hoop, the male hoop part having a tongue on its distal end insertable into a groove formed in the distal end of the female hoop part with said tongue and groove incorporating resiliently interengageable catch means which lock said hoop parts in the closed condition of the hoop with the distal end of the female hoop part overlapping the tongue on the male hoop part, the end of the overlapping region of the female hoop part confronting a shoulder on the male hoop part to leave a gap between said end and confronting shoulder on the radially outer surface of the closed hoop, which gap narrows in the direction towards the axis of the closed hoop and is dimensioned such that a finger nail pressed into the gap forces the overlapping regions apart in the circumferential direction of the closed hoop to effect disengagement of the catch means.

Suitably, the part of the catch means on the tongue is a peg projecting radially outwardly from the distal end of the tongue and the part of the catch means on the female hoop part is a recess adjacent to the proximate end of the groove, which recess may open to the radially outer surface of the female hoop part.

Suitably the hinge connection between the hoop parts is of the clevis type and is located in a position such that the catch means close towards each other in the radial direction of the hoop as the hoop parts are moved towards the closed condition of the hoop. Suitably, in the closed condition of the hoop, the catch means on the female part and the hinge connection subtend an angle at the centre of the hoop of between 130° and 140°.

The hoop can, for example, be of gold, silver or platinum and the tongue and a hinge pin for the hinged connection can be of the same material as the rest of the hoop. However, the tongue can be reinforced e.g. with an insert of harder material (e.g. an insert of white gold in a gold ring).

One embodiment of expansible finger ring in accordance with the invention will now be described, by way of example, with reference to the accompanying drawing, in which:–

Figures 1 and 4 show the ring, respectively, in the closed and expanded condition,

Figure 2 is an edge view of the ring seen from above in Figure 1,

Figure 3 is an edge view of the ring seen from below in Figure 1,

Figure 5 is a partially sectioned enlarged view of the ring shown in a partially closed condition,

Figure 6 is a view from above of the distal end of the male hoop part of the ring shown in Figure 5, and

Figure 7 is a view of the distal end of the female hoop part shown in the direction of the arrow VII in Figure 5.

Referring to Figures 1 and 4, the ring will be seen to comprise a hoop in two parts, a male part 1 subtending on angle of some 240° at the centre of the hoop and a female part 2 subtending an angle of some 180° at the centre of the hoop. The hoop parts 1 and 2 are hingedly connected by means of a clevis hinge which includes a pin 3 and interconnects bifurcations 1*a* on the male part 1 and a tab 2*a* on the female part 2. The pin 3 is flush with the surface of the hoop and is fast with the bifurcations 1*a*. In practice it will be virtually invisible.

The hoop parts are separable at their distal ends by virtue of the engagement of a tongue 4 forming a projecting end of the male hoop part 1, in a groove 5 in the distal end of the female part 2. The tongue 4 has a peg 6 on its distal end, the peg being of generally square cross-section (see Figure 6) but with the sharp corners and edges chamfered somewhat on its radially outer end. The tongue 4 locates in the groove 5 in the distal end of the female hoop part 2 in the closed condition of the ring, this groove 5 incorporating a recess 7 which opens to the outer circumferential surface of the hoop part 2. The position of the hinge pin 3 is such that the locus (shown by the dash line 8 in Figure 5) of the trailing edge of the peg 6 as the hoop parts 1 and 2 are moved into the closed condition of the ring, intersects the groove 5 close to the distal edge of the recess 7 requiring squeezing pressure to be applied to the hoop parts 1 and 2 to snap the peg 6 into the recess 7 and lock the ring into its closed position. Chamfering of the corners and edges of the peg 6 and a chamfering of the distal edge of the recess 7 adjusts the force necessary to achieve this locking and can be determined by trial and experiment.

In the closed condition of the ring a gap 9 (see Figure 2) appears between the distal end of the hoop part 2 and a shoulder 10 on the hoop part 1. The gap 9 narrows in the direction towards the axis of the closed hoop and is dimensioned such that pressing a finger nail into the tapered gap 9 (in the direction of the arrow A in Figure 1) cams the hoop parts 1 and 2 away from each other in the circumferential direction of the ring to an extent necessary to disengage the peg 6 from the recess 7. Once again the dimensioning of this gap 9 can easily be determined by trial and experiment.

The natural resilience of the hoop parts (in particu-

lar of the tongue 4) permits many locking and unlocking operations to be effected without the security of the locking being noticeably reduced. With a ring of very pure gold an insert of harder metal (e.g. white gold) can be incorporated in the tongue 4 to improve the ring performance in this respect.

Although the drawing shows a simple hoop ring, it will be appreciated that a shoulder supporting an ornament can be provided, and this could be centrally located on the hoop part 2 so that when the ring is worn on the second or third fingers, the gap 9 and pin 3 are located between adjacent fingers.

Although the recess 7 is exposed on the outer surface of the ring in the drawing (so that the end of the peg 6 can be seen in the locked condition of the ring) this is not essential, and in a ring of sufficient thickness in the radial direction, the recess 7 could be blind.

In the ring illustrated, the peg 6 is some 1 mm square in cross-section. The dimensions of the other parts can be deduced from the drawing since Figures 1 to 4 are drawn to the same scale and Figures 5 to 7 to twice that scale.

CLAIMS

1. An expansible finger ring comprising male and female hoop parts, joined at a hinge connection for movement between expanded and closed conditions of the hoop, the male hoop part having a tongue on its distal end insertable into a groove formed in the distal end of the female hoop part with said tongue and groove incorporating resiliently interengageable catch means which lock said hoop parts in the closed condition of the hoop with the distal end of the female hoop part overlapping the tongue on the male hoop part, the end of the overlapping region of the female hoop part confronting a shoulder on the male hoop part to leave a gap between said end and confronting shoulder on the radially outer surface of the closed hoop, which gap narrows in the direction towards the axis of the closed hoop and is dimensioned such that a finger nail pressed into the gap forces the overlapping regions apart in the circumferential direction of the closed hoop to effect disengagement of the catch means.

2. A ring as claimed in claim 1, in which the part of the catch means on the tongue is a peg projecting radially outwardly from the distal end of the tongue and the part of the catch means on the female hoop part is a recess adjacent to the proximate end of the groove.

3. A ring as claimed in claim 2, in which the recess in the female hoop part opens to the radially outer surface of the female hoop part.

4. A ring as claimed in any preceding claim, in which the hinge connection between the hoop parts is of the clevis type and is located in a position such that the catch means close towards each other in the radial direction of the hoop as the hoop parts are moved towards the closed condition of the hoop.

5. A ring as claimed in claim 4, in which in the closed condition of the hoop, the catch means on the female part and the hinge connection subtend an angle at the centre of the hoop of between 130° and 140°.

6. A ring as claimed in any preceding claim, in which the hoop is of gold, silver or platinum.

7. A ring as claimed in claim 6, in which the tongue is reinforced with an insert of harder material than that used for the rest of the hoop.

8. An expansible finger ring substantially as hereinbefore described with reference to, and as illustrated in, the accompanying drawing.

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